



## Environment Board

**Date:** Thursday 24 October 2019

**Time:** 10.00 am                      **Public meeting**                      Yes

**Venue:** Room 116, West Midlands Combined Authority, 16 Summer Lane, Birmingham, B19 3SD

### Membership

Councillor Ian Courts (Chair)	Portfolio Lead for Environment, Energy & HS2
Councillor Oliver Butler	Walsall Metropolitan Borough Council
Councillor Maria Crompton	Sandwell Metropolitan Borough Council
Councillor Steve Evans	City of Wolverhampton Council
Councillor Ian Kettle	Dudley Metropolitan Borough Council
Councillor Andy Mackiewicz	Solihull Metropolitan Borough Council
Councillor Jim O'Boyle	Coventry City Council
Councillor Waseem Zaffar	Birmingham City Council

Quorum for this meeting shall be the Portfolio Lead for the Environment, Energy & HS2 *and* at least three other members.

If you have any queries about this meeting, please contact:

**Contact**                      Dan Essex, Governance Services Manager  
**Telephone**                      (0121) 214 7505  
**Email**                              dan.essex@wmca.org.uk

# AGENDA

No.	Item	Presenting	Pages
<b>Items of Public Business</b>			
1.	Apologies for Absence	Chair	None
2.	Declarations of Interest Members are reminded of the need to declare any disclosable pecuniary interests they have in an item being discussed during the course of the meeting. In addition, the receipt of any gift or hospitality should be declared where the value of it was thought to have exceeded £25 (gifts) or £40 (hospitality).	Chair	None
3.	Chair's Remarks (if any)	Chair	None
4.	Minutes - 8 February 2019	Chair	1 - 4
5.	Zero Carbon Challenge / Climate Action Plan - Presentation	Henry Kippin / Claire Spencer	Verbal Report
6.	Transition of the WMCA HS2 Growth Strategy Environment & Landscape Workstream into the Strategic Remit of the Environment Board	Henry Kippin	5 - 8
7.	Low Emissions and ULEV Strategy	Henry Kippin	9 - 22
8.	Environment Board Future Items of Business	Chair	Verbal Report
9.	Update on Member Priorities	Chair	Verbal Report
<b>Date of Next Meeting</b>			
10.	Thursday 27 February 2020 at 10.00am	Chair	None



## West Midlands Combined Authority

### Environment Board

Friday 8 February 2019 at 2.00 pm

### Minutes

#### Present

Councillor Qadar Zada (Chair)

Dudley Metropolitan Borough Council

Item No.	Title
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8.	<b>Apologies for Absence</b>
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Apologies for absence were received from Councillor Tony Diccico (Solihull), Councillor David Hosell (Sandwell), Councillor Jim O'Boyle (Coventry) and Councillor Waseem Zaffar (Birmingham).

9.	<b>Inquorate Meeting</b>
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The Governance Services Manager reported that, in accordance with the WMCA's constitution, the meeting was inquorate. The recommendations contained within the minutes would be submitted to the WMCA Board on 22 March 2019 for formal approval and adoption.

10.	<b>Minutes - 10 September 2018</b>
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The minutes of the meeting held on 10 September 2018 were agreed as a correct record.

11.	<b>Environment Board Action Plan - Update on Progress</b>
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The board considered a report from Simon Slater, Head of Environment, providing high level progress on the delivery of the Environment Board Action Plan relating to air quality, clean growth, green infrastructure and green buildings.

At its meeting on 10 September 2018, this board agreed the annual Action Plan which set out the how the WMCA would integrate environmental issues within its leadership, strategies and delivery. The report set out in more detail the progress that had been made in delivering the workplan during the last six months, along with the action that was proposed to be undertaken up to June this year.

The Chair requested that future progress reports should particularly focus on air quality, green infrastructure and clean growth, demonstrating progress being made by local authorities within the region and what the WMCA was doing to add value to this work. He considered it more beneficial to focus on delivering noticeable progress in a smaller number of workstreams, rather than spread resources too thinly across too many different areas.

Simon Slater undertook to update the Chair mid-March as to the progress being made.

Recommended to the WMCA Board that:

- (1) Progress on the Environment Board Action Plan and forward plan be noted.

**12. Environment Board Action Plan - Update on Regional Targets**

The board considered a report from Simon Slater, Head of Environment, containing a dashboard of regional indicators and targets linked to the monitoring of the Environment Board Action Plan and the immediate priorities of air quality, clean growth, green infrastructure and green buildings.

At its last meeting, the board requested that a stocktake of existing environmental targets was undertaken and set against existing action plan priorities. This had enabled a dashboard of targets to be produced, which would be reported on to the board on an annual basis.

The Chair enquired as to whether the targets contained within the Action Plan were realistically achievable, or were likely to be too aspirational. Simon Slater explained that where there were no existing targets, a number of the new targets were based on the best performing combined authorities. There would also be further work on updating the carbon reduction target, based on the latest evidence.

Recommended to the WMCA Board that:

- (1) The approach on regional environment indicators and targets linked to the Environment Board Action Plan priorities to be 'best in class' be approved.
- (2) It be agreed that a further update and further quantification of the impact these targets would have on increasing healthy lives and jobs be submitted to a future meeting of the Environment Board.

**13. Update on Developing a Low Emissions Strategy - Air Quality and Carbon Emissions**

The board considered a report from Simon Slater, Head of Environment, on the progress made to date in delivering the clean growth and air quality priorities contained within the Environment Board Action Plan.

A steering group had been established to finalise the development and implementation plan relating to air quality and low emissions issues. This group contained representatives from constituent councils along with representatives from industry, public health and Transport for West Midlands. It was now expected to submit an air quality and carbon emissions strategy and action plan to this board in June, followed by submission for formal approval by the WMCA Board in July.

In respect of air quality priorities, the Chair considered that any individual local authority scheme should include measures to mitigate against its impact on neighbouring authorities. He considered it helpful if the WMCA could provide oversight of air quality strategies across the region so as to seek to ensure that there was close alignment throughout the West Midlands.

Recommended to the WMCA Board that:

- (1) The progress on the development of the Low Emissions Strategy and Action Plan be noted.

**14. Developing a West Midlands Natural Capital Investment Strategy and Programme**

The board considered a report from Simon Slater, Head of Environment, setting out the proposed approach to the development of a Natural Capital Investment Strategy and programme.

'Natural capital' was defined as the elements of nature that directly or indirectly produced value to people, including ecosystems, species, freshwater, land, minerals, the air and oceans, as well as natural processes and functions. The total benefit that humans gained from the natural environment was valued to be worth \$124.8 trillion per year, twice as much as the global aggregate GDP.

Following discussions at the West Midlands Natural Capital Roundtable, it was proposed that the WMCA would develop a strategic approach to help co-ordinate existing activity within the region, highlight its attractiveness to investors and to promote the impact of this activity. This would culminate with a final strategy and programme being submitted for approval to this board in September.

Recommended to the WMCA Board that:

- (1) The approach of developing a West Midlands Natural Capital Investment Strategy and Programme be approved.

**15. Friday 7 June 2019 at 1.00pm**

The date of the next meeting was noted.

The meeting ended at 2.50 pm.

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## Environment Board

<b>Date</b>	24 October 2019
<b>Report title</b>	Transition of the WMCA HS2 Growth Strategy Environment & Landscape Workstream strategic remit to the WMCA Environment Board
<b>Portfolio Lead</b>	Councillor Ian Courts - Environment, Energy & HS2
<b>Accountable Employee</b>	Henry Kippin, Director of Public Service Reform email: henry.kippin@wmca.org.uk tel: (0121) 214 7880  William Martin, HS2 Project Manager email: william.martin@wmca.org.uk tel: 07703 373302
<b>Report has been considered by</b>	HS2 Operations Board - 9 October 2019

**Recommendation(s) for action or decision:**

**The Environment Board is recommend to:**

- (1) To endorse the principle of seeking to transition the Environment & Landscape workstream into the Environment portfolio, as per the transition path taken by the HS2 Jobs & Skills workstream (which was incorporated within the West Midlands Regional Skills Plan/Productivity and Skills Portfolio).
- (2) Support the principle of aligning the operational remit of the Environment & Landscape workstream to existing design groups for HS2 construction and the other HS2 Growth Strategy Programmes.

## **1. Purpose**

The purpose of this report is to seek 'in principle' support to transition and mainstream the HS2 Environment & Landscape workstream/Board strategic remit into the WMCA Environment portfolio.

## **2. Background**

- 2.1.** The HS2 Growth Strategy was adopted in July 2015. Subsequent to this, the resourced workstreams that make up the implementation plan of the Growth Strategy have continued to develop and mature. As part of the development of the programme, the E&L workstream was established as a 'wrap round' workstream to enhance environmental opportunities the Growth Strategy and HS2 itself would create for the region.
- 2.2.** Since being established this workstream has been successful in coordinating activity and identifying opportunities. However, more recently with changes to the Growth Strategy programme and wider development of WMCA activity it has become apparent there is a requirement to embed the workstream within the WMCA Environment portfolio in order to ensure resources are used effectively, efficiently, to maximum effect and avoid duplication.

## **3. Environment and Landscape Workstream/Board**

### **3.1. Current remit**

Since being established in November 2016, the E&L Board/Workstream has been meeting at least 6 times per year with the remit to work with HS2 Ltd on maximising the opportunities associated with mitigation works; embed best practice by working closely with Growth Strategy Workstreams on their environmental aspirations and to identify pipeline projects (which contribute to the maximising opportunities agenda).

### **3.2. Issues identified and need for change**

To date this workstream has been relatively successful in establishing a strong partnership approach and identifying projects for development. However, it has been reliant on the good working spirit of members to work collaboratively together to achieve the goals as set out in the agreed remit/terms of reference. During this time the workstream's direct resource was a coordination role provided by the WMCA's HS2 Growth Strategy programme team. There has been no direct funding to aid the development of a programme for enhancement work. In addition, the E&L workstream has had limited success in influencing decisions and projects. Therefore, to ensure value is added in the most effective way, the E&L Board agreed there is a need to revisit and revise the scope and remit of the E&L Board/workstream.



### **3.3. Possible future remit**

Subject to more collaborative work being undertaken with members to identify the details, the strategic element of the E&L Board could be transitioned into the scope of the WMCA's Environment Board. This would place HS2 construction and other Growth Strategy programmes within the Clean Growth and Natural Gain priority areas of the WMCA's Environment Portfolio. As the WMCA's Environment portfolio matures, wider project/programme updates and progress towards delivering those priorities would be overseen by the WMCA Environment Board. This could include monitoring metrics and benefits that HS2 and the Growth Strategy are contributing towards delivering through designs and business case approvals. This would become the channel where the strategic overview and progress updates could be discussed and reviewed.

- 3.4.** This would leave the other element of the E&L workstream needing to be addressed. The remit here would be to map out all of the design/officer groups that are developing the programmes for HS2 construction and/or Growth Strategy programme development. There is a need to ensure that design work and Growth Strategy workstreams are working towards the delivery of WMCA environmental priorities. E&L Members would be invited to relevant design groups covering their areas of interest to increase the level of interface of environmental expectations by making sure environmental elements/priorities are embedded from the outset. This approach should ensure that previous E&L Board members can actively influence programmes/projects etc. as they develop in the recognised forums/groups. It is anticipated the supporting officer group to the WMCA Environment Board would have an E&L Board member to be the conduit linking these operational elements to the Environment Board and be the escalation channel if needed.
- 3.5.** Therefore, in line with how the HS2 Jobs & Skills workstream which was transitioned into the WMCA's Productivity and Skills portfolio, it is proposed that the E&L Workstream/Board is permitted to explore how a transition into the WMCA's Environment Portfolio could potentially work.

## **4. WMCA Environment Board**

### **4.1. Agreeing this approach outlined above would:**

- (a) Set a path and agree in principle the transition the E&L Board/Workstream into the WMCA Environment portfolio;
- (b) Consolidate the strategic E&L Workstream remit and mainstream it into the WMCA.

## **5. Next Steps**

This report recommends the principle of the transition of the E&L Workstream into the WMCA's Environment Portfolio. It is anticipated, subject to this being agreed that a transition plan would then be reported back to the Board for agreement.

A key next step will be to identify (a) how we ensure that this agenda is driven forward effectively and the links with HS2 growth board are maintained in practice; and (b) what this practically means in terms of resources and the secretariat function that will be needed.

Officers have committed to taking these steps pending the Environment Board's steer on the over-arching principle.

**6. Financial Implications**

There are no direct financial implications of this report.

**7. Legal Implications**

There are no direct financial implications of this report.

**8. Equalities Implications**

There are no identified implications of this report

**9. Inclusive Growth Implications**

Inclusive growth comes from organisations working together to transform peoples' lives by developing new ways of positive change in communities. The WMCA is committed to promoting inclusive growth across the West Midlands so that all residents and communities can benefit from investment and opportunities. Inclusive Growth is directly linked to the need for quality environments for all to benefit from which is what the merging of this workstreams will seek to achieve.

**10. Geographical Area of Report's Implications**

All of the WMCA constituent member geographies.

**11. Other Implications**

No other implications have been identified.

**12. Schedule of Background Papers**

None



## Environment Board

<b>Date</b>	24 October 2019
<b>Report title</b>	Low Emissions and ULEV Strategy
<b>Portfolio Lead</b>	Councillor Ian Courts - Environment, Energy & HS2  Councillor Ian Ward - Transport
<b>Accountable Chief Executive</b>	Deborah Cadman, West Midlands Combined Authority email: <a href="mailto:deborah.cadman@wmca.org.uk">deborah.cadman@wmca.org.uk</a> tel: (0121) 214 7552
<b>Accountable Employee</b>	Mike Waters, Director of Policy, Strategy & Innovation, TfWM email: <a href="mailto:mike.waters@tfwm.org.uk">mike.waters@tfwm.org.uk</a> tel: 07584 333540  Henry Kippin, Director of Public Service Reform email: <a href="mailto:henry.kippin@wmca.org.uk">henry.kippin@wmca.org.uk</a> tel: (0121) 214 7880  Ian Martin, Investment Director email: <a href="mailto:ian.martin@wmca.org.uk">ian.martin@wmca.org.uk</a>
<b>Report has been considered by</b>	STOG - 7 October 2019

**Recommendation(s) for action or decision:**

**The Environment Board is recommended to:**

- (1) Consider the scenarios presented in this report for the acceleration of electric charging and enabling energy infrastructure in the West Midlands – noting the strategic importance of this issue to our Industrial Strategy, Strategic Economic Plan and Climate Change ambitions.
- (2) Agree to take forward a paper to WMCA Board – which presents these scenarios, including our recommendation of ‘option 3’ in the report below: a collaborative, at-scale model which gives local authorities maximum control and leverage over the way in which EV infrastructure is rolled out across the whole region.
- (3) Note that work has been commissioned within WMCA/TfWM to create a more detailed evidence base as to existing provision and future demand that will be needed in order to progress any of the options noted in this paper. The results of this will be brought back to Environment Board in Spring 2020.

## 1.0 Purpose

- 1.1 The purpose of this report is to ask for the Environment Board's support and steer in moving forward a key plank of the region's ambitious agenda around clean transport and industrial strategy. It does this in three ways:
- First, it provides the Board with the current position relating to the development of Ultra Low Emissions Vehicle (ULEV) infrastructure provision for the West Midlands – including the provision of electric charging points, and the underlying energy provision needed for them to be viable;
  - Second, it presents the Board with an analysis of potential scenarios for scaling up EV charging in the region, presenting a recommendation to the Board which will shape the nature and pace of this provision from here on in – including the scale at which regional partners act together; and the nature of collaboration between us. The optimal scenario we present seeks to maximise private sector leverage, minimise public sector cost, and ensure the most inclusive delivery;
  - Third, it situates this within the context of the West Midlands region's ambitions to accelerate its transition to a net-zero carbon economy; and realise its commitment to supporting greater regional autonomy and stability within its energy sector.
- 1.2 In short – the paper argues that approaching EV infrastructure collaboratively would give the West Midlands the best chance of achieving economies of scale, a long-term revenue stream (eg more private capital into the region), and better benefits to more people. It explains the principle and the rationale behind this argument – but does not pre-judge whether this is necessarily the right choice for WMCA members; and does *not* assume that WfWM or WMCA would lead.

## 2.0 Background

- 2.1 Creating the conditions for growth in electric vehicle manufacturing and take up is fundamental to this Region's headline economic strategy and its strategic transport plan. It has the potential to create a triple benefit – impacting on citizen wellbeing embedding inclusivity, environmental sustainability, and the creation of new avenues for export growth within a key West Midlands industry.
- 2.2 The EV market – and the associated market for battery technology – is small but growing fast – as evidenced by the prevalence of EV model lines across the major car manufacturers, and the number of chargepoints springing up within major cities in the UK and Europe. The West Midlands is already innovating in electric, hydrogen and autonomous vehicles, reflecting the key role they have to play as one part of a wider modal shift towards cleaner travel and increased use of integrated public transport.
- 2.3 The effective roll out of EV infrastructure requires a number of issues to be brought together, including:
- Number and scale of charging points for electric vehicles – guided by analysis of how many points we will need across our places, based in turn on projections of current and future demand and consideration of how market failure may be avoided for areas that are disadvantaged

- Nature of the underlying energy infrastructure – which is impacted by demands on the underlying low voltage (LV) network created by more chargepoints, and the cost of necessary upgrades
- The value of collaboration and scale – recognising there are a number of routes to achieving the outcomes above, and choices to make about whole-regional or sub-regional working; and the value add that a co-ordinated Region wide approach can provide
- Potential delivery models – which will depend on choices made on the above, and which have important implications on the commercial readiness and viability of our ULEV approach

2.4 Meeting our climate change goals as a country and a region inevitably means being more proactive about moving away from fossil fuel based transport (initially through EV, then progressively through hydrogen), whilst in parallel increasing the proportion of this fuel source that is generated from renewables. The WMCA Climate Action Plan - which is under development and will be published at November WMCA Board - will ensure that the EV agenda is fully aligned and integrated with the wider climate change drivers in a way that maximises benefits and impacts.

### **3 A Brief Outline of the Policy Environment**

This section outlines the backdrop to the questions posed to Environment Board – in particular the clear signal provided nationally and regionally as to the importance of transition to cleaner transport and infrastructure:

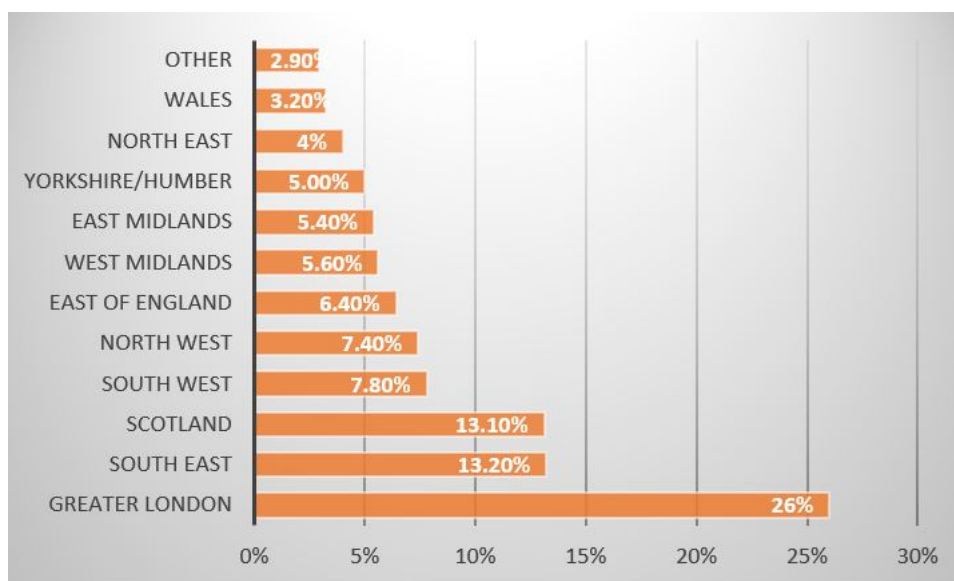
- 2.1 New national and regional targets have recently been established, which set out a vision to achieve zero carbon emissions from transport. This will be achieved through a transition of vehicles from current fossil based fuels, to lower carbon fuels, and ultimately to pure battery electric and hydrogen fuel cell based powertrains powered from sustainable energy sources.
- 2.2 The draft Climate Change Act 2008 (2050 Target Amendment) Order 2019, approved by Parliament in June 2019, commits to achieving net zero greenhouse emissions by 2050.
- 2.3 In July 2019, WMCA committed to setting a West Midlands target of net-zero emissions no later than 2041, with interim targets based on a 2018 baseline of 36% reduction by 2022, and 69% reduction by 2027. A Climate Action Plan is to be taken to WMCA Board in November 2019 for consideration, covering the key themes of ‘clean growth’, ‘clean air’, ‘nature gain’ and ‘lead by local example’. Local authorities are developing their own approaches to the climate challenge, and the WMCA has committed to supporting those approaches however possible.
- 2.4 The overarching aim of Government strategy is for the UK to be at the forefront of the design and manufacture of Ultra Low Emission Vehicles (ULEVs), and for all new cars and vans to be effectively zero emission by 2040. Government is seeking at least 50% and up to 70% of new car sales to be ULEV by 2030. Recent government announcements have reinforced this high level of ambition.
- 2.5 In the UK there are now over 17,000 publicly available chargepoints, including 1,700+ rapid chargers (50kW) which is one of the largest rapid networks in Europe. The country has 100,000+ residential off street chargepoints, 2,000 workplace located chargepoints and over 1,250 on street residential chargepoints in place.

- 2.6 The Committee on Climate Change (2018) has forecast that 60% of new cars and vans will be plug in electric or hybrid by 2030. In order to meet associated charging infrastructure, they predict the number of rapid chargers located near the major roads network needs to expand to 1,170 by 2030 (from 460 in 2016), and demand for ‘top-up’ charging while parking around towns and local areas is estimated to require a rise from 2,700 chargepoints in 2016 to over 27,000 by 2030.
- 2.7 As of August 2019, battery electric car sales are up 93% year on year in the UK compared to 2018 (OLEV). However, plug in hybrid car sales are down by 37% over the same period. As we note further on in this paper, detailed work is being commissioned so that we have a detailed and nuanced understanding of current and future demand for electric charging here in the region.

### 3.0 Current Position

- 3.1 In the West Midlands region, there are 1,450 chargepoints (Zap-Map, 2019). A comparison with UK regions is shown in Table A below:-

Table A: Percentage share of chargepoint installations by UK Region



- 3.2 Following a bidding process undertaken by Government in 2015, a number of cities were successful in sharing Go Ultra Low City scheme funding of £40 million, including London, Bristol, Nottingham and Milton Keynes. This has enabled them to provide significant chargepoint installations in their respective areas.
- 3.3 Many new chargers are installed on a commercial basis by destination locations such as workplaces, hotels and supermarkets providers in an effort to attract EV customers and promote sustainability. In the WMCA area, Birmingham, Coventry, Wolverhampton and TfWM have been successful in winning Government grants to install slow, fast and rapid charging infrastructure.

### 3.4 Current public installations are in progress or planned as follows -

- Birmingham will install 100 rapid (50kw) and 96 fast (22kw) chargers, with an announcement on procurement process expected imminently
- Coventry have completed installation of 24 out of 39 rapid chargers with partner ESB and Siemens and have completed installation of 80 slow and 10 fast on street residential charging points
- Wolverhampton have installed 6 out of 24 rapid/fast chargers
- TfWM – currently have 14 chargers across 6 P&R sites and at Summer Lane and are considering options for upgrade of facilities across the 20,000+ P&R spaces
- TfWM/LAs (not inc. Birmingham) are installing circa 200 on street residential chargepoints (7-22kw) with Virgin Media and partners, with project funding from Innovate UK

## 4.0 Strategy development

This section outlines how the options presented in this paper have been developed in collaboration with partners within the region:

4.1 During the summer of 2019 ULEV workshops were led by Coventry CC, Energy Capital and TfWM with local authority colleagues, Warwickshire CC and a range of stakeholders from Energy and ULEV related public and private sector bodies. From these workshops a set of requirements for a ULEV Strategy have been developed and issued for consultancy support to produce a high-level strategy for the West Midlands and Warwickshire. Subject to interest the geographic scope can be expanded to include other authorities in the wider WMCA area. CENEX have been appointed and key outputs to be delivered in the commission are:

- A clearly articulated vision and implementation plan for accelerating EV adoption, including common standards for charging infrastructure
- A detailed evidenced understanding of where and what type of infrastructure is need by what point to support earlier adopting households
- An understanding of what the commercial market is likely to provide to meet the requirements and where additional support through grant or otherwise is likely to be required
- A business case for an EV incentive and take-up scheme
- An understanding of what additional demands will be placed (and where) on the energy grid, and how this overlays with existing and anticipated gaps and spare capacity

5.2 There are a range of issues that will be addressed which have been identified through development of the specification for the strategy, including:

- The market for ULEV vehicles is currently small and therefore is perceived as niche and/or risky, expensive, or inaccessible
- There remains a lack of understanding of the alternative choices to ICE (Internal Combustion Engine) vehicles and of the business case for change from ICE to ULEV
- There is limited availability of ULEV re-fuelling infrastructure and consumer accessibility, meaning anxiety over availability is a barrier to adoption



- The diversity of re-fuelling infrastructure and lack of interoperability makes current user experience poor
- Energy supply limitations on the low voltage network can make the 'n<sup>th</sup>' charging point uncommercially viable due to grid upgrade costs
- The transport system supply chain is overwhelmingly vested in skills associated with ICE across all tiers of manufacturing, vehicle servicing and sales, creating a barrier and cost overhead to change
- The West Midlands produces ~43% of the UK's GVA for automotive which is currently substantially geared towards ICE vehicles

5.3 Of particular concern is the issue of market engagement and 'land grab' deals offered by some chargepoint operators. Opportunities are being presented to local authorities (in this region and more widely) in which operators are seeking exclusivity of supply of infrastructure at key locations over a long period in return for a promise of delivery of a significant volume of upfront EV charging infrastructure from which some revenue share is proposed. Such market intent is very much welcome and indeed is already being acted upon by local partners, but as a region it is also critical to be cognisant of and open about potential issues of limited interoperability, technology resilience and under-delivery of services to marginalised areas. If our collective approach remains fragmented these issues which will inevitably be part of the future picture.

5.4 In a number of cases (based on anecdotal evidence from across the country) it appears local authorities are entering deals in which they don't retain rights to the energy supply Meter Point Administration Numbers (MPANS), control of which can ultimately give them much stronger ability to ensure that any deals entered into are fulfilled and that future roadside infrastructure upgrades are undertaken in a timely manner to ensure vehicle technology and charging requirements evolve at the required pace.

## 6.0 Infrastructure delivery – three scenarios

This section outlines three scenarios – different ways of delivering the charging infrastructure required to meet projected future demand in the West Midlands.

6.2 **Scenario 1** – Pursuing a largely market-led approach, wherein chargepoint delivery is primarily based on open market principles, and focused only where there is sufficient spare grid capacity and sufficient perceived immediate demand to create short term profit. Commercial providers select their preferred locations and charger type and approach individual local authorities to strike deals where this involves public land or highway. A range of revenue sharing deals and delivery rates are expected to be achieved across the area though different concession contracts with different chargepoint providers. This broadly characterises the approach adopted to date.

6.3 **Scenario 2** - An evolution of the current position is where approximately 3-4 '**Delivery Clusters**' of LAs across the WMCA area work together within their cluster to specify and engage companies to deliver roadside infrastructure across that zone/area. Each area establishes a specification for charging infrastructure, land/parking and highway allocations. A common basic set of standards for interoperability across the region would be adhered to on a 'best practice' guidance and over-arching strategy and future re-investment to support technology evolution would be established on the basis of each local cluster level deal.

6.4 The scenarios painted above will provide specific benefits to particular areas, and Members may well choose to pursue these options. But there are good reasons to believe they are sub-optimal solutions to the commercial, environmental and inclusive growth goals set out above. To wit:

- Negotiating independent contracts with EV charge point suppliers without a mechanism to address investment in the energy supply network is likely to produce a poorer financial result. Whilst the first movers may release some additional value from Operators keen to gain a market foothold in the region for expansion, this could have a negative effect on others bringing forward opportunities later as spare energy grid capacity will have been taken up (including at detriment to housing and industrial network users requiring network connections).
- First mover operators will tend to make an initial investment in the highest return sites which do not require investment in the distribution network, establishing a position which gives them A) benefits of scale they can apply to make the area less attractive to competitors; and B) cherry picking the most lucrative sites without the local authority having significant leverage ensure investment in the energy supply grid or future road side infrastructure upgrade. In addition, a valuable opportunity could be lost for consumers to link into one easily understood network of charging provision.
- A further lost benefit would be an inability to work with one joined-up group of Operators to influence and plan the electricity supply network. It is easy to see how the latter could have a negative effect over the long term.
- Areas that do not offer an immediate return to Operators, with lower perceived future EV use and/or areas that require significant infrastructure investment to increase grid capacity, could remain “dark” without the public sector investing. This problem may be particularly exacerbated in less affluent areas – which would run contrary to our aims of inclusive growth.

### **Scenario 3 – Working in Collaboration at Scale**

6.5 The third scenario (developed through early dialogue with regional transport officers and some soft market testing) would enable a joined up, high private investment approach wherein the funding and delivery of charging infrastructure is managed across the West Midlands region, working closely with Energy Capital to integrate with wider energy solutions. In this scenario, an investor backed mechanism would secure chargepoint provider(s) to work collaboratively with the region to deliver at scale over a sustained period, re-investing directly to a jointly held plan in both roadside infrastructure and the low voltage distribution network.

6.6 Whilst the Model needs to be further explored with investors and developed in close collaboration with Members, there would appear to be greater financial advantage in working together, as well as the undoubted benefit to the environment in doing so. At root, this is about realising the value of collaboration and the economy of scale that a WM-wide model provides. The WMCA does not need to lead. And regional partners have already established Energy Capital as a collaborative body to advance its collective ambitions around energy devolution and infrastructure development.

## 7.0 Recommended way forward

This section shows how our recommended model could be taken forward in practice – and what the benefits would be to the region.

- 7.1 Acting together under a West Midlands framework to provide for chargepoints at scale would have the following potential benefits:

**Public Users** would benefit from the knowledge that chargepoints are ubiquitous and as they are available through one Operator arrangement, they are accessible and suitable for their vehicle. Use of chargepoints away from home is particularly important in the West Midlands where some of the housing stock is of such an age that many houses only have on street parking. Switching to EVs needs a confidence boost that comes from the availability of chargepoints.

**Commercial Users** are ready to discuss a region wide connected network. Many organisations that use commercial vehicles are keen to explore how they can move to EV fleets with clear environmental advantages to the Region. In order to progress, they require easy access to a comprehensive network of chargepoints region wide. This may carry economic benefit to a Framework Model.

**Operators** benefit from scaling up quickly. There is real efficiency in negotiating one big contract, albeit a complex one. A network can be properly planned with the right charging point in the right location, with a focus on providing a comprehensive network without gaps in provision that adversely impact on some communities. Duplication in chargepoints will be avoided and a roll out sensibly and economically introduced which caters for technological development in vehicle batteries. Operators can struggle to find investors. Despite their delivery ability they are short of opportunities at such scale as to propel them into an arena where the returns are attractive to upper tier investors.

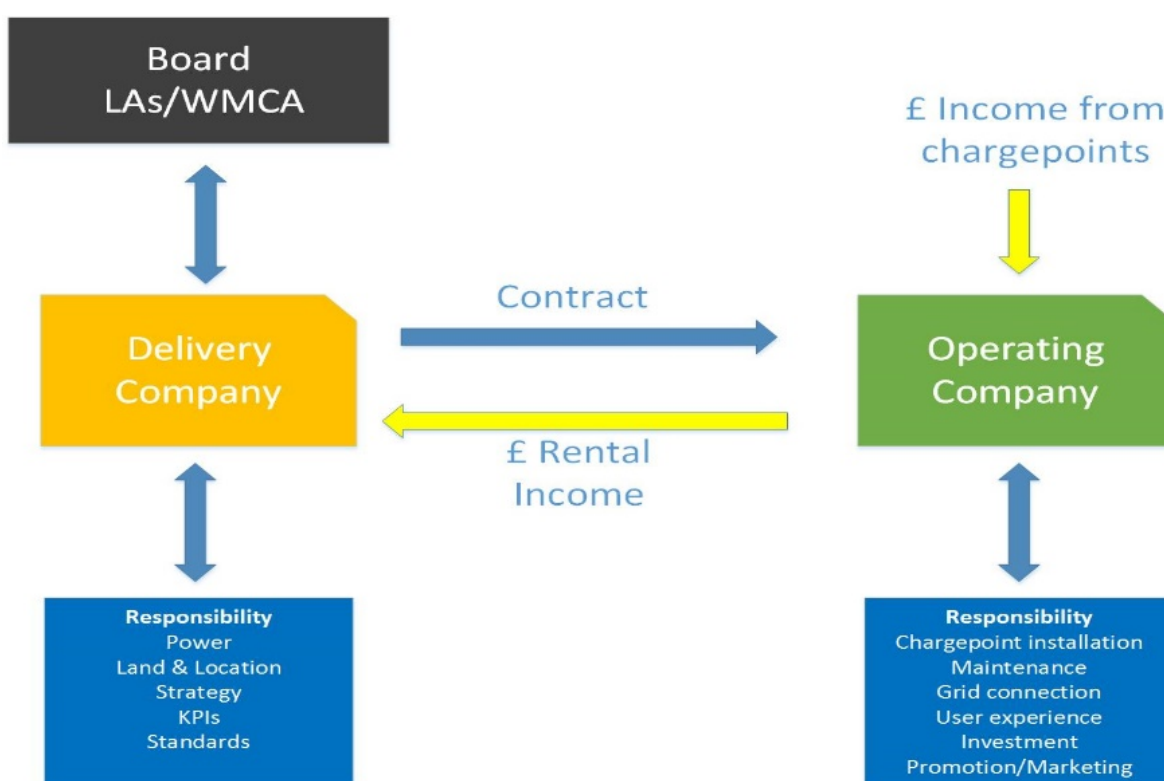
**Investors** will see an opportunity here. At scale there will be many more serious investors in the market. Because of their organisation's financial muscle and the scale of opportunity, they will be able to leverage debt. The ability to lever finance will increase the "price" they are likely to pay as well as Investors having a mind on market domination and the benefits this could bring when negotiating with other regions.

**Local Authorities and TfWM** could be real beneficiaries, both in terms of speed of at-scale roll out for their population and in financial terms. Investors interested in this sector are likely to put a much higher forward looking Enterprise Value on the opportunity of buying into an operating concept with scale. This future potential is often priced at greater multiples of the value of those smaller companies in the market.

- 7.2 In this scenario, the conceptual model would provide the creation of a collectively owned Delivery Company (DelCo) that contracts with a private sector Operating Company (OpCo), which would deliver the charging infrastructure on-street and in publicly controlled off-street parking and other locations. The DelCo would own the energy supply rights and make the investment in the energy infrastructure. The DelCo would take responsibility for setting the re-investment strategy to ensure re-investment in roadside infrastructure keeps pace with technological development.

- 7.3 The collective bargaining power that would result from the DelCo and the opportunity to bid at scale for those interested in the OpCo is likely to achieve the best financial result (for the region as a whole). It also means because the contract with the OpCo will need renewing in the future, every time a renewal takes place the bids are likely to be more advantageous to the region as a whole than acting independently. As EV take-up grows, the future value of OpCo can be captured by DelCo as it will retain sufficient control over both the electricity supply and physical space.
- 7.4 Further benefits of a DelCo are that skills and expertise are accessible in one place and a cohesive strategy can be developed with the Energy providers. Retaining long term ownership of the rights to draw power puts the DelCo in a strong position. A diagram of the proposed structure is shown below. We would be happy to discuss with Environment Board colleagues how the commercial model outlined below would work in practice.

Diagram of Delivery Company/Operating Company structure



## 8.0 Stakeholder Map

- 8.1 There are a range of stakeholders that will need to be engaged through any infrastructure delivery programme, as set out in Table B below:-

Table B – Stakeholder and delivery framework

	LA WMCA Shires	Government	National Grid	WPD Landlord/ Developer	Charge Point Provider	Taxi/ Ride share	Business	Car Club	Investor	Home Energy Provider	OEM & Car Retailer
Strategy	✓	✓	✓	✓					✓		
Funding	✓	✓		✓	✓	✓	✓		✓		
Land	✓		✓	✓	✓		✓				
EV Demand Assessment	✓	✓		✓		✓			✓		✓
Energy Grid Capacity Assessment		✓	✓	✓	✓						
EV User	✓	✓			✓		✓	✓		✓	✓
Chargepoint					✓					✓	✓
Energy Grid Connection	✓			✓	✓		✓			✓	
Enforcement	✓				✓		✓				
Promotion & Comms	✓	✓			✓	✓	✓	✓		✓	✓
EV supply						✓		✓		✓	✓
Chargepoint Standards		✓		✓	✓						☐
Energy Grid Resilience		✓	✓	✓							

## 9.0 Energy Infrastructure

This section outlines the energy requirements of any material expansion of EV Charging infrastructure across the region:

- 9.1 It is important to note that the underlying Low Voltage (LV) electricity supply network is used by domestic and industrial customers as well as any potential public- or privately-sponsored EV charging points. The costs of network reinforcement in order to accommodate any new EV charging infrastructure may range from £0 to £1m+ per site depending on the location and the range of competing uses. A modest cost estimate for the whole region in aggregate over the next 10 years could be £200M-£800M.
- 9.2 Under current energy market regulations, these costs will *at best* be shared across all network users (including the fuel poor and industry) and *at worst* be met in full by the next-coming user of the network local to a given charge point (e.g., a housing developer or potential inward investor).
- 9.3 For these reasons, alongside any initiative taken by the region in EV charging, it is important that the region acquires the capacity and competence to engage at strategic planning level with the energy network providers - specifically having the ability to bring together and optimise planned energy demands covering transport, housing and industry across the region and in any given proposed investment location.

9.4 Regional energy infrastructure financing mechanisms to share the risks and rewards of such investment in ways that reflect local political priorities also need to be developed. The work to develop these competences and mechanisms has been taken forward separately by the WMCA and partners, led by Energy Capital, and this will need to be further supported and accelerated in parallel with any investments in EV infrastructure alone.

## **10.0 Financial implications**

10.1 There are no immediate financial implications flowing as a direct result of this report. The availability of Grants to fund future development of the proposal needs to be assessed, with one option through the Government Charging Infrastructure Investment Fund (£400m), made up of £200m provided by Government and £200m by Private Sector investors, the first tranche (£75m) of which was formally launched in September 2019. This commercially focussed fund is aimed at developing charging infrastructure for electric vehicles, and will enable businesses to access the finances they need to build more charging points, making it easier and more viable for the public to make the switcher to cleaner, ultra-low emission cars. A quantification of financial risks will need to be evaluated in developing the proposal.

## **11.0 Legal implications**

11.1 There are no immediate legal implications flowing from the contents of this report. However, Legal Advice will be sought at the appropriate stage and in a timely manner, in order to facilitate the required mobilisation between authorities including the incorporation of the relevant delivery organisations and over delivery structure.

## **12.0 Equalities implications**

12.1 The strategy is likely to directly positively impact electric car vehicle owners who are more likely to be from more affluent backgrounds. However, the positive environmental impact of the strategy is likely to positively impact people from lower socio-economic backgrounds, ethnic minority groups, older people and people with disabilities as air pollution disproportionately impacts people from these groups. Direct equalities implications are likely to will rise from any bids or infrastructure proposals which will be assessed on a case by case basis. Activity such as car clubs has potential to benefit the inclusion agenda which will need to be balanced against a natural bias in the early market adoption of ULEV technologies to the more affluent demographics.

## **13.0 Inclusive Growth implications**

13.1 The development of ultra low emission vehicles and associated infrastructure contributes to the improvement air quality and reduces harmful particulates in the environment. The propositions made in this paper will be factored into the Climate Action Plan which is being developed for publication/consultation at November 2019 WMCA Board. Air quality and the extent to which the benefits of working at scale – such as those portrayed in this paper – are shared by all of our communities, are central elements of the WMCA's inclusive growth framework. Any decision to proceed with ULEV at-scale in the region would be underpinned by a business case which scrutinises inclusive growth impact as part of the strategic case.

## **14.0 Geographical Area of Report's Implications**

14.1 This report relates primarily to the metropolitan West Midlands and Warwickshire as these areas have engaged in the initial workshops. However, there is potential to work region-wide depending on appetite from WMCA Members.

## **15.0 Schedule of background papers**

- ULEV Adoption and re-fuelling report to STOG, 16 April 2018
- ULEV Update report to STOG August 2018
- Electric Vehicles and Air Quality briefing note, 3rd June 2019
- WM ULEV Strategy Workshop Update 6th July 2019
- Low Emissions and ULEV Strategy report, STOG 7<sup>th</sup> October 2019

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